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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,286	01/23/2004	Masao Mogi	1186.1032	4675

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EXAMINER	
CHAU, MINH H	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/762,286	MOGI ET AL.	
	Examiner	Art Unit	
	Minh H Chau	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5-12 and 25-32* is/are allowed.

6)☒ Claim(s) *1-4,13-16 and 21-24* is/are rejected.

7)☒ Claim(s) *17-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/23/04 & 7/6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-4, 13-16 and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al. (US # 4,947,746) in view of Brunner (US # 5,031,534).

With respect to claims 1, 13 and 21, Jeschke et al. teach a print control strip and a printing method of printing a control strip (1) includes color fields or patches (2) on a printed matter, measuring color densities of patches and performing printing control based on the color densities, the color fields or patches (2) include four typical patches of black, cyan, magenta and yellow at dot area rates of 75% or 60 to 85% (see Fig. 6), a measuring section (14) for measures the color densities of the patches and the printing control is the control for keeping the color densities of the four typical patches of the width of each ink zones in predetermined color-density ranges (see Fig. 6 and cols. 9-11 of Jeschke et al.).

Jeschke et al. teach all the limitation except for the recitation "four typical patches of black, cyan, magenta and yellow at dot area rates of 60 to 85% in the width of each ink key". Jeschke et al. teach a control strip include color fields (2) in each of the ink zones and also four typical patches of black, cyan, magenta and yellow at dot area

rates of 75% or 60 to 85% (see Fig. 6). In view of this teaching, it would have been obvious to modify the color fields or patches (2) in the ink zones to include four typical patches of black, cyan, magenta and yellow at dot area rates of 75% so that the use of halftone color patches of black, cyan, magenta and yellow at the dot rates of 75% or 60 to 85% can be properly control.

Jeschke et al. teach all the limitation except for the recitation of "the patches are arranged in the same direction as the arrangement of ink keys of a printing device".

Brunner teaches a method and apparatus for setting up for a given print specification defined by a binary value representing solid color density and dot gain in an autotype printing run including the patches (43, 44) are arranged in the same direction as the arrangement of ink keys of a printing device (see Fig. 2 and col. 4).

In view of this teaching, it would have been obvious to one of skill in the art to modify the method and device of Jeschke et al. to include the patches are arranged in the same direction as the arrangement of ink keys of a printing device as taught by Brunner for the advantage of allowing the density for the patches in ink keys can be accurately control.

With respect to claims 2, 14 and 22, see Fig. 6 of Jeschke et al. that teach the dot area rates of the four typical patches range between 75 and 85%.

With respect to claims 3, 15 and 23, the combined method and devices of Jeschke et al. and Brunner teach all the limitation, except for the recitation of "the cyan and magenta typical patches are arranged at the middle of the width of each ink key".

Jeschke et al. teach a control strip (1) including ink zones (4) comprise color fields (2) of different colors (black, cyan, magenta and yellow) that are arranged alternately over the ink zones (see Fig. 6 and col. 9, lines 50+).

In view of this teaching, it would have been obvious to one of skill in the art to modify the ink control strip of the combined product of Jeschke et al. and Brunner to include cyan and magenta typical patches are arranged at the middle of the ink key, since it has been held that rearranging parts of an invention involves only routine skill in the art (In re Japikse, 86 USPQ 70) so that the density of specific selected color located at the middle of ink key such as cyan and magenta can be properly control.

With respect to claims 4 and 16 and 24, Jeschke et al. teach a print control strip and a printing method of printing a control strip (1) includes color fields or patches (2) on a printed matter, measuring color densities of patches and performing printing control based on the color densities, the color fields or patches (2) include four typical patches of black at a dot area rate of 100%, and cyan, magenta and yellow at dot area rates of 75% or 60 to 85% (see Fig. 6), a measuring section (14) for measures the color densities of the patches and the printing control is the control for keeping the color densities of the four typical patches of the width of each ink zones in predetermined color-density ranges (see Fig. 6 and cols. 9-11 of Jeschke et al.).

Jeschke et al. teach all the limitation except for the recitation "four typical patches of black at a dot area rate of 100%, and cyan, magenta and yellow at dot area rates of 60 to 85% in the width of each ink key". Jeschke et al. teach a control strip include color fields (2) in each of the ink zones and also four typical patches of black at a dot area

rate of 100%, and cyan, magenta and yellow at dot area rates of 75% or 60 to 85% (see Fig. 6). In view of this teaching, it would have been obvious to modify the color fields or patches (2) in the ink zones to include four typical patches of black at a dot area rate of 100%, and cyan, magenta and yellow at dot area rates of 75% so that the use of solid color patch of black at a dot area rate of 100%, and halftone color patches cyan, magenta and yellow at the dot rates of 75% or 60 to 85% can be properly control.

Jeschke et al. teach all the limitation except for the recitation of "the patches are arranged in the same direction as the arrangement of ink keys of a printing device".

Brunner teaches a method and apparatus for setting up for a given print specification defined by a binary value representing solid color density and dot gain in an autotype printing run including the patches (43, 44) are arranged in the same direction as the arrangement of ink keys of a printing device (see Fig. 2 and col. 4).

In view of this teaching, it would have been obvious to one of skill in the art to modify the method and device of Jeschke et al. to include the patches are arranged in the same direction as the arrangement of ink keys of a printing device as taught by Brunner for the advantage of allowing the density for the patches in ink keys can be accurately control.

Allowable Subject Matter

3. **Claims 17-20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. **Claims 5-12 and 25-32** are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claims 17 and 18 have been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of a printed matter on which a control strip comprising patches is printed including four solid patches of black, cyan, magenta, and yellow at dot area rates of 100% in the width of each ink key.

Claims 19 and 20 have been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of a printed matter on which a control strip comprising patches is printed including four solid patches of black, cyan, magenta, and yellow at dot area rates of 100% and four middle patches of black, cyan, magenta, and yellow at dot area rates of 40 to 50%.

6. The following is an examiner's statement of reasons for allowance:

Claims 5-7 and 25-27 have been indicated for allowance because the prior art fail to teach the entire combination of a printing method and a printing control device for printing a control strip including the printing control determines whether or not values obtained based on the color densities of the typical patches and the color densities of the solid patches are included in predetermined ranges on the four colors the width of each ink key, and determines that printing is not normal when it is not determined that the values are included in the ranges.

Claims 8-10 and 28-30 have been indicated for allowance because the prior art fail to teach the entire combination of a printing method and a printing control device for printing a control strip including the printing control determines on the four colors whether or not values obtained based on differences between the color densities of the solid patches and the printing control the color densities of the typical patches and differences between the color densities of the typical patches and the color densities of the middle patches are included in predetermined ranges in the width of each ink key, and determines that printing is not normal when it is not determined that the values are included in the ranges.

Claims 11-12 and 31-32 have been indicated for allowance because the prior art fail to teach the entire combination of a printing method and a printing control device for printing a control strip including controlling the ink keys for keeping the color density of the patch of an optional color selected from cyan, magenta, and yellow and the color density of the patch of black in predetermined color-density ranges and keeping a value showing the balance of the color densities of cyan, magenta, and yellow patches in a predetermined range in the width of each ink key; and controlling the ink keys for keeping the color densities of black, cyan, magenta, and yellow patches in the color-density ranges in the width of each ink key and obtaining a value showing the balance of the color densities of cyan, magenta, and yellow patches at each predetermined cycle, after the value showing the balance enters in the range.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Applicant's attention is invited to the patents to Quadracci (US # 5,791,249), Kohler (US # 5,748,331), Schramm et al. (US # 6,446,555) and Mogi et al. (Pub. No. US 2004/0159254

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh H Chau whose telephone number is (571) 272-2156. The examiner can normally be reached on M - TH 9:30AM - 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHC
January 24, 2005

MINH CHAU
PRIMARY EXAMINER